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Test Report on Cement

Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	HONNAPPA MURTHY
Sample ID	Cement
Date of Sample Tested	25-03-2019
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	34 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	382	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	5mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	27.00%	

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TEST REPORT	
Clients	Bruhat Bangalore Mahanagara Palike
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY
Total Weight in gr	3000

SIEVE ANALYSIS

Type of Material	40 mm down size			Proposed Use	PCC
Sample Location	At Site			Date of Sampling	25-03-2019
				Date of Testing	25-03-2019
IS Sieve Size	Weight Retained in gm	Cum. Weight Retained in gm	Cumulative Weight Retained in %	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA-2007) % of Passing For Graded Aggregate of Nominal Size
80.00mm	0	0	0.00	100.00	100
63.00mm	0	0	0.00	100.00	-
40.00mm	98	98	3.27	96.73	95-100
20.00mm	1468	1566	52.20	47.80	30-70
10.00mm	632	2198	73.27	26.73	10-35
4.75mm	720	2918	97.27	2.73	0-5
Pan	82	3000	100.00	0.00	

Remarks : ✓ Satisfactory / Not Satisfactory

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Consultant's Representative

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TEST REPORT	
Clients	BRUHAT BENGALORE MAHANAGARA PALIKE
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

SPECIFIC GRAVITY AND WATER ABSORPTION
FINE AGGREGATE (IS-2386-PART-3)

Type of Material	Sand/M sand	Proposed Use	P.C.C
Location/Source	At Plant/site	Date of Sampling	25-03-2019
Period of Soaking	24 hours	Date of Testing	25-03-2019

Sl. No.	Test Property	TRIAL - 1	TRIAL - 2	TRIAL - 3	Average
A	Weight of sturated surface dry sample gm.	682	683	692	
B	Weight of oven - dry sample gm.	673	675	685	
C	Weight of Pycnometer Filled with water gm	1275	1275	1275	
D	Weight of Pycnometer + sample + water gm	1698	1698	1708	
E	Bulk specific gravity $\frac{B}{(C+A-D)}$	2.598	2.596	2.645	**2.613**
G	Absorption (%) $\frac{(A-B)*100}{B}$	1.337	1.185	1.022	**1.181**

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TEST REPORT	
Clients	Bruhat Bangalore Mahanagara Palike
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

SIEVE ANALYSIS

Total Weight:	3000 gms				
Type of Material	Fine aggregate (River Sand/M sand)		Proposed Use	P.C.C	
Sample Location	At Plant/site		Date of Sampling	25-03-2019	
			Date of Testing	25-03-2019	
IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing (Zone-II)
10.00 mm	0	0	0	100.00	100
4.75 mm	241	241	8.03	91.97	90 - 100
2.36 mm	283	524	17.47	82.53	75 - 100
1.18 mm	522	1046	34.87	65.13	55 - 90
0.600 mm	481	1527	50.90	49.10	35 -59
0.300 mm	622	2149	71.63	28.37	8-30
0.150 mm	610	2759	91.97	8.03	0 - 10
Pan	241	3000			-

Remarks : ✓ Satisfactory / Not Satisfactory

Consultant's Representative

TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

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Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura	
Client	Bruhat Bengaluru Mahanagara Palike	
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	HONNAPPA MURTHY	
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28)		
	Date:	**28-03-19**
Layer no. or level	WMM I layer	
Depth of hole	250mm	
Field density:	1	2
Wt. of wet material from hole (Ww) gms.	6125	6199
Wt. of sand+cylinder before pouring (w1) gms.	14000	14000
Wt. of sand+cylinder after pouring (w2) gms.	9714	9700
Wt. of sand in cone (w3) gms.	855	850
Wt. of sand in hole (w4)=(w1-w2-w3) gms.	3431	3450
Bulk density of sand (γs)gm/cc	1.32	1.31
Bulk density of material(i.e. wt. of the wet material) (γb)=(Ww/w4*(γs))gm/cc	2.36	2.35
Moisture meter reading(moisture content)	12.20	12.20
Result		
FDD(Wt.of the dry material)=(100γb/100+mc)gm/cc	2.10	2.10
MDD	2.14	2.14
OMC	13.50%	13.50%
% compaction obtained	98.14	98.03
% compaction required	98%	98%

Consultant's Representative

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Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura	
Client	Bruhat Bengaluru Mahanagara Palike	
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	HONNAPPA MURTHY	
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28)		
	Date:	**28-03-19**
Layer no. or level	WMM I layer	
Depth of hole	250mm	
Field density:	1	2
Wt. of wet material from hole (Ww) gms.	6237	6137
Wt. of sand+cylinder before pouring (w1) gms.	14000	14000
Wt. of sand+cylinder after pouring (w2) gms.	9715	9745
Wt. of sand in cone (w3) gms.	835	842
Wt. of sand in hole (w4)=(w1-w2-w3) gms.	3450	3413
Bulk density of sand (γs)gm/cc	1.31	1.31
Bulk density of material(i.e. wt. of the wet material) (γb)=(Ww/w4*(γs))gm/cc	2.37	2.36
Moisture meter reading(moisture content)	12.10	12.10
Result		
FDD(Wt.of the dry material)=(100γb/100+mc)gm/cc	2.11	2.10
MDD	2.14	2.14
OMC	13.50%	13.50%
% compaction obtained	98.72	98.19
% compaction required	98%	98%

Consultant's Representative

TEJUS
CONSULTANTS

Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura	
Client	Bruhat Bengaluru Mahanagara Palike	
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	HONNAPPA MURTHY	
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28)		
	Date:	**28-03-19**
Layer no. or level	WMM I layer	
Depth of hole	250mm	
Field density:	1	2
Wt. of wet material from hole (Ww) gms.	6237	6137
Wt. of sand+cylinder before pouring (w1) gms.	14000	14000
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Wt. of sand in hole (w4)=(w1-w2-w3) gms.	3450	3413
Bulk density of sand (γs)gm/cc	1.31	1.31
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Moisture meter reading(moisture content)	12.10	12.10
Result		
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MDD	2.14	2.14
OMC	13.50%	13.50%
% compaction obtained	98.72	98.19
% compaction required	98%	98%

Consultant's Representative

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike	
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura	
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	HONNAPPA MURTHY	
Total Weight:	10000	gms

SIEVE ANALYSIS

Type of Material	20 mm down size		Proposed Use	Concrete	
Sample Location	At Plant		Date of Sampling	01-04-2019	
			Date of Testing	01-04-2019	
IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing
40.00 mm	0	0	0	100	100
20.00 mm	265	265	2.65	97.35	95 - 100
10.00 mm	5000	5265	52.65	47.35	25 - 55
4.75 mm	4330	9595	95.95	4.05	0 - 10
Pan	405	10000			

Remarks : ✓ Satisfactory / Not Satisfactory

Consultant's Representative

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike				
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura				
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore				
Contractor	HONNAPPA MURTHY				
Total Weight:	10000	gms			

SIEVE ANALYSIS

Type of Material	20 mm down size		**Proposed Use**	Concrete	
Sample Location	At Plant		**Date of Sampling**	01-04-2019	
			Date of Testing	01-04-2019	
IS Sieve Size	**Weight Retained**	**Cum. Weight Retained**	**Cum. % Retained**	**Cum. % Passing**	**Spec. Limit (%) Passing**
40.00 mm	0	0	0	100	**100**
20.00 mm	280	280	2.80	97.20	**95 - 100**
10.00 mm	4680	4960	49.60	50.40	**25 - 55**
4.75 mm	4530	9490	94.90	5.10	**0 - 10**
Pan	510	10000			

Remarks : Satisfactory / Not Satisfactory

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY
Total Weight:	10000 gms

SIEVE ANALYSIS

Type of Material	20 mm down size	Proposed Use	Concrete	
Sample Location	At Plant	Date of Sampling	01-04-2019	
		Date of Testing	01-04-2019	

IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing
40.00 mm	0	0	0	100	100
20.00 mm	264	264	2.64	97.36	95 - 100
10.00 mm	4988	5252	52.52	47.48	25 - 55
4.75 mm	4325	9577	95.77	4.23	0 - 10
Pan	423	10000			

Remarks : ✓ Satisfactory / Not Satisfactory

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike				
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura				
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore				
Contractor	HONNAPPA MURTHY				
Total Weight:	10000	gms			

SIEVE ANALYSIS

Type of Material	20 mm down size		Proposed Use	Concrete	
Sample Location	At Plant		Date of Sampling	01-04-2019	
			Date of Testing	01-04-2019	
IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing
40.00 mm	0	0	0	100	100
20.00 mm	276	276	2.76	97.24	95 - 100
10.00 mm	4655	4931	49.31	50.69	25 - 55
4.75 mm	4530	9461	94.61	5.39	0 - 10
Pan	539	10000			

Remarks : ✓ Satisfactory / Not Satisfactory

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike	
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura	
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	HONNAPPA MURTHY	
Total Weight:	10000	gms

SIEVE ANALYSIS

Type of Material	12.5 mm down size		Proposed Use	Concrete	
Sample Location	Plant		Date of Sampling	01-04-2019	
			Date of Testing	01-04-2019	
IS Sieve Size (in mm)	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing
20.0	0	0	0	100	100
12.5	578	578	5.78	94.22	90-100
10.0	3340	3918	39.18	60.82	40-85
4.75	5420	9338	93.38	6.62	0-10
Pan	662	10000			

Remarks : ✓ Satisfactory / Not Satisfactory

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike	
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura	
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	HONNAPPA MURTHY	
Total Weight:	10000	gms

SIEVE ANALYSIS

Type of Material	12.5 mm down size		Proposed Use	Concrete	
Sample Location	Plant		Date of Sampling	01-04-2019	
			Date of Testing	01-04-2019	
IS Sieve Size (in mm)	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing
20.0	0	0	0	100	100
12.5	580	580	5.80	94.20	90-100
10.0	3360	3940	39.40	60.60	40-85
4.75	5496	9436	94.36	5.64	0-10
Pan	564	10000			

Remarks : ✓ Satisfactory / Not Satisfactory

Consultant's Representative

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TEST REPORT

Clients	BRUHAT BENGALORE MAHANAGARA PALIKE
Project	Improvements to Roads and Drains of Sahakaranagar A,E,F,G Blocks and Surrounding areas in Ward No. 07 Byatarayanapura
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

SPECIFIC GRAVITY AND WATER ABSORPTION
FINE AGGREGATE (IS-2386-PART-3)

Type of Material	Sand/M sand	Proposed Use	Concrete
Location/Source	At Plant/site	Date of Sampling	01-04-2019
Period of Soaking	24 hours	Date of Testing	01-04-2019

Sl. No.	Test Property		TRIAL - 1	TRIAL - 2	TRIAL - 3	Average
A	Weight of sturated surface dry sample gm.		660	662	670	
B	Weight of oven - dry sample gm.		656	653	661	
C	Weight of Pycnometer Filled with water gm		1275	1275	1275	
D	Weight of Pycnometer + sample + water gm		1693	1691	1692	
E	Bulk specific gravity	B / (C + A - D)	2.711	2.654	2.613	**2.659**
G	Absorption (%)	(A - B) *100 / B	0.610	1.378	1.362	**1.117**

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TEST REPORT	
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Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

SIEVE ANALYSIS

Total Weight:	3000 gms				
Type of Materia	Fine aggregate (River Sand/M sand)		Proposed Use	Concrete	
Sample Location	At Plant/site		Date of Sampling	01-04-2019	
			Date of Testing	01-04-2019	
IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing (Zone-II)
10.00 mm	0	0	0	100.00	100
4.75 mm	236	236	7.87	92.13	90 - 100
2.36 mm	275	511	17.03	82.97	75 - 100
1.18 mm	511	1022	34.07	65.93	55 - 90
0.600 mm	542	1564	52.13	47.87	35 -59
0.300 mm	658	2222	74.07	25.93	8-30
0.150 mm	510	2732	91.07	8.93	0 - 10
Pan	268	3000			-
Remarks :	Satisfactory / Not Satisfactory				

Consultant's Representative